App No.: 09/877,387 Docket No.: 252312007500 Inventor: David S. JONES Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE REPLACEMENT SHEET OPNP **NHCbz** Fmoc N HN NHCbz O A <u>2</u> OPNP <u>13</u> NHCbz NHCbz NHCbz NHCbz Fmoc t NHCbz NHCbz <u>3</u> <u>4</u> NHCbz NHCbz **NHCbz** NHCbz NH_2 NHCbz <u>6</u> <u>5</u> NHCbz **RSH** <u>8</u> <u>7</u>

Figure 1

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE REPLACEMENT SHEET

Figure 2

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE REPLACEMENT SHEET

Figure 3

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

Figure 4

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

REPLACEMENT SHEET

S(CH₂)₆O-P-O (CA)₁₀.(TG)₁₀

$$(TG)_{10}.(CA)_{10}.O - \overset{O}{P} - O(CH_2)_6 S \overset{O}{H} + \underbrace{O}_{n}\overset{O}{H} + \underbrace{O}_{n$$

Figure 5

Docket No.: 252312007500

Inventor: David S. JONES
Title: MULTIVALENT PLATFORM MOLECULES COMPRISING

HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

Figure 6

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

Docket No.: 252312007500

REPLACEMENT SHEET

200; average n = approximately 503 (PEG 20K) 201; average n = approximately 114 (PEG 5K) 205; average n = approximately 261 (PEG 12K)

301; average n = approximately 682 (PEG 30K)

D1-NH
$$=$$
 NO $=$ NO $=$ NO $=$ NH-D1 $=$ NO $=$ NH-D1 $=$ NO $=$ NH-D1 $=$ NO $=$ NH-D1 $=$ NH-

D1-NH

$$N = NO$$
 $N = NO$
 $N = NO$

total PEG = 20K

Figure 7

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING
HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

Docket No.: 252312007500

$$H_2NO-G_2$$
 O
 G_2-ONH_2
 H_2NO-G_2
 G_2-ONH_2
Formula 9

$$H_2NO-G_2$$
 $O-R_C-O-N$ G_2-ONH_2 H_2NO-G_2 G_2-ONH_2

Formula 10

$$H_2NO-G_2$$
 O G_2-ONH_2 $O-(CH_2CH_2O)_nCH_2CH_2-O-N$ G_2-ONH_2 G_2-ONH_2

Formula 11

Formula 12

$$H_2NO-G_2$$
 O G_2-ONH_2
 H_2NO-G_2 G_2-ONH_2
Formula 13

Figure 8

App No.: 09/877,387 Docket No.: 252312007500 Inventor: David S. JONES
Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

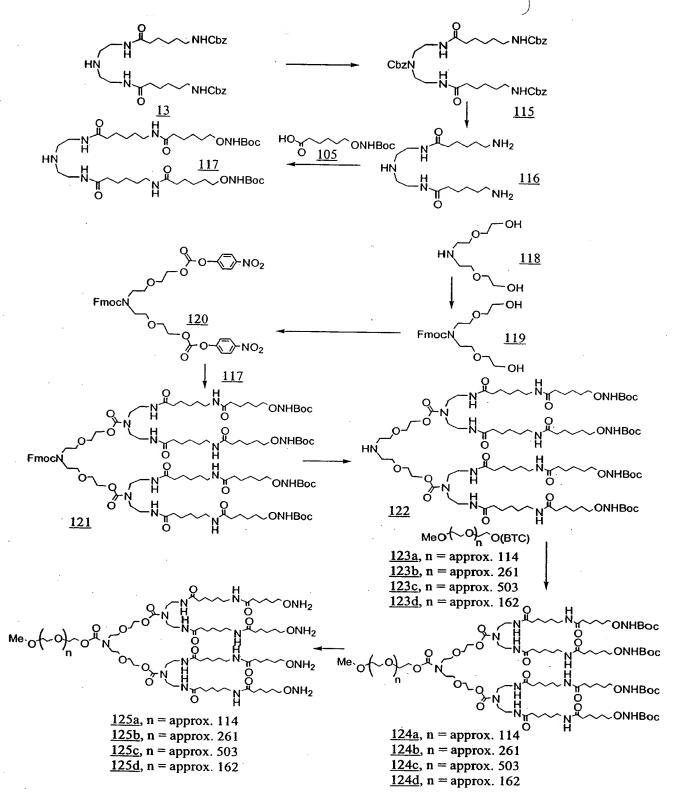
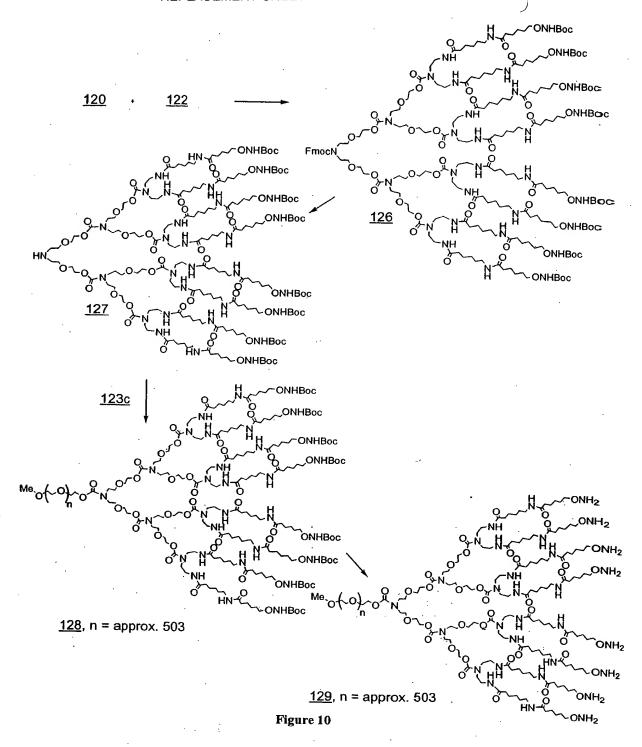


Figure 9

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING

HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE



Docket No.: 252312007500

Inventor: David S. JONES

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

(BTC)O
$$\begin{pmatrix} O \\ O \\ O \\ O \end{pmatrix}$$
 O(BTC) + 117

130, n = approx. 481

BochNO $\begin{pmatrix} O \\ O \\ O \\ O \\ O \end{pmatrix}$ How ONHBOC ONBOC ONB

Figure 11

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

PNPO TO OTOPNP + BocHN
$$(O \rightarrow_{n} NH_{2})$$
 + BocHN $(O \rightarrow_{n} NH_{2})$ + Boc

Figure 12

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING

HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

Figure 13

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

Figure 14

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

Figure 15

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE REPLACEMENT SHEET

300, n = approx. 503

Figure 16

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

Figure 17

Docket No.: 252312007500

Inventor: David S. JONES

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

MeO
$$\begin{pmatrix} O \\ O \\ D \end{pmatrix}$$
, $n = approx. 500$

$$0.0 + 0.0$$

Figure 18

Docket No.: 252312007500

App No.: 09/877,387 Docket No.: 252312007500
Inventor: David S. JONES
Title: MULTIVALENT PLATFORM MOLECULES COMPRISING
HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

												tcc Ser				48
ccg Pro	tta Leu	aaa Lys	aca Thr 20	ttc Phe	tat Tyr	gag Glu	cca Pro	gga Gly 25	gaa Glu	gag Glu	att Ile	acg Thr	tat Tyr 30	tcc Ser	tgc Cys	96
aag Lys	ccg Pro	ggc Gly 35	tat Tyr	gtg Val	tcc Ser	cga Arg	gga Gly 40	gly ggg	atg Met	aga Arg	aag Lys	ttt Phe 45	atc Ile	tgc Cys	cct Pro	144
ctc Leu	aca Thr 50	gga Gly	ctg Leu	tgg Trp	ccc Pro	atc Ile 55	aac Asn	act Thr	ctg Leu	aaa Lys	tgt Cys 60	aca Thr	ccc Pro	aga Arg	gta Val	192

Figure 19

*Inventor: David S. JONES
Title: MUII TIVALENT PLATFORM MOLECULES COMPR

Docket No.: 252312007500

Title: MULTIVALENT PLATFORM MOLECULES COMPRISING HIGH MOLECULAR WEIGHT POLYETHYLENE OXIDE

REPLACEMENT SHEET

N-**R.....PR**-co₂H

Domain 1 of β_2GPI (D₁, where bold letters stand for single letter amino acid code of terminal amino acids of Domain 1 of $\beta_2GPI)$

pH 5.5 1-2 M NaOAc CuSO₄ glyoxylic acid

N-R....PR-CO₂H

Transaminated Domain 1 (TA/D1) Comprising a terminal glyoxyl group

Figure 20